

Abstract

Circuit arrangement for rectifying the output voltage of a sensor supplied from an oscillator

In the case of a measuring device having a sensor supplied from an oscillator for a non-electrical variable and having a circuit arrangement downstream of the sensor for rectifying the output voltage of the sensor, interference pulses, which are superimposed on the output voltage of the movement sensor and are rectified when the output voltage of the movement sensor is rectified, falsify the measurement result. This is particularly true for spiked interference pulses having a high amplitude. In order to reduce such falsifications of the measurement result, the output voltage of the sensor is supplied to a ramp-generating circuit arrangement, in which the mathematical sign of the transmission behavior can be controlled. The mathematical sign of the transmission behavior of the ramp-generating circuit arrangement is controlled by a switching signal, whose flanks correspond to the zero crossings of the output voltage of the sensor. Such circuit arrangements can advantageously be used in measuring devices for non-electrical variables having sensors which are supplied with an alternating current. These include, for example, movement transducers having sensors which convert the position of a

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moveable component to an electrical output signal, in particular in the form of an electrical DC voltage. The moveable component may be the control piston of a pneumatic or hydraulic valve.